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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/805,004

03/18/2004

Avi Costo

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10/05/2007

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EXAMINER

TRAN, PHUC H

ART UNIT

PAPER NUMBER

2616

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/805,004

Applicant(s)

COSTO ET AL.

Examiner

PHUC H. TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-29 and 31-34 is/are rejected.
- 7) ☒ Claim(s) 6, 16 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/03/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 8-14, 17-28 and 32-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Crayford (5,610,903).

- With respect to claims 1-4, 8-14, 17-28 and 32-34, Crayford disclose an auto negotiation system for a communication network/method comprising: establishing a connection with a link partner (see box 52 in figure 1A) at a common transmission speed; setting a duplex mode used for transmissions to a first duplex mode (see column 5 lines 25-27); monitoring a transmission error rate with the link partner (see column 5 lines 29-30); changing the duplex mode to a second duplex mode in response to detecting that the transmission error rate exceeds a threshold (see column 5 lines 30-37 and column 7 lines 25-28);

wherein the duplex mode is changed without terminating the connection with the link partner (see abstract lines 6-7);

wherein the first duplex mode comprises full duplex and the second duplex mode comprises half duplex(see column 5 lines 30-37 and column 7 lines 25-28);

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wherein the first duplex mode comprises half duplex and the second duplex mode comprises full duplex(see column 5 lines 30-37 and column 7 lines 25-28);

further comprising: forcing the transmission speed to a predetermined link speed, wherein the connection is established if the link partner transmits at the predetermined link speed (see column 9 lines 45-53);

wherein the monitored transmission error rate comprises a bit error ratio of a number of bits received in error to a total number of bits received within a predefined time window (see column 7 lines 25-28);

further comprising: continuing to monitor the transmission error rate with the link partner after changing the duplex mode; and changing the duplex mode from one of the first to second duplex mode or from the second to first duplex mode in response to detecting that the transmission error rate exceeds the threshold(see column 5 lines 30-37 and column 7 lines 25-28); an adapter; a data link layer in communication with the adapter, wherein the data link layer is operable to: establish a connection between the adapter and the link partner at a common transmission speed; set a duplex mode at which the adapter transmits data to a first duplex mode; monitor a transmission error rate with the link partner; and (iv) change the duplex mode to a second duplex mode in response to detecting that the transmission error rate exceeds a threshold(see column 5 lines 30-37 and column 7 lines 25-28);

detect a transmission speed of the link partner after determining that the link partner does not have auto-negotiation enabled, wherein the common connection speed comprises the detected transmission speed of the link partner (see column 9 lines 45-53);

wherein the adapter is further operable to perform: force the transmission speed to a predetermined link speed, wherein the connection is established if the link partner transmits at the predetermined link speed (see column 9 lines 45-53);

wherein the monitored transmission error rate comprises a bit error ratio of a number of bits received in error to a total number of bits received within a predefined time window (see column 7 lines 25-28);

wherein the data link layer is further operable to perform: continue to monitor the transmission error rate with the link partner after changing the duplex mode; and change the duplex mode from one of the first to second duplex mode or from the second to first duplex mode in response to detecting that the transmission error rate exceeds the threshold(see column 5 lines 30-37 and column 7 lines 25-28); further comprising: a processor; and a software driver implementing the data link layer executed by the processor; wherein the data link layer is implemented in the adapter;

a processor; an adapter; a data link layer execute by the processor in communication with the adapter, wherein the data link is operable to: establish a connection between the adapter and the link partner at a common transmission speed; set a duplex mode at which the adapter transmits to a first duplex mode; monitor a transmission error rate with the link partner; and (iv) change the duplex mode to a second duplex mode in response to detecting that the transmission error rate exceeds a threshold(see column 5 lines 30-37 and column 7 lines 25-28);

wherein the article of manufacture is operable to: establish a connection with the link partner at a common transmission speed; set a duplex mode to a first duplex mode; monitor a transmission

error rate with the link partner; change the duplex mode to a second duplex mode in response to detecting that the transmission error rate exceeds a threshold(see column 5 lines 30-37 and column 7 lines 25-28);

wherein the article of manufacture is further operable to: force the transmission speed to a predetermined link speed, wherein the connection is established if the link partner transmits at the predetermined link speed (see column 9 lines 45-53);

wherein the monitored transmission error rate comprises a bit error ratio of a number of bits received in error to a total number of bits received within a predefined time window(see column 7 lines 25-28); and

wherein the article of manufacture is further operable to: continue to monitor the transmission error rate with the link partner after changing the duplex mode; and change the duplex mode from one of the first to second duplex mode or from the second to first duplex mode in response to detecting that the transmission error rate exceeds the threshold(see column 5 lines 30-37 and column 7 lines 25-28).

Claim Rejections - 35 USC § 103

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5,7,15,17,29,and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crayford in view of Yang et al. (5,414,700).

- With respect to claims 5, 7, 15, 17, 29 and 31, Crayford discloses all the subject matter of the claimed invention with the exception of setting a flag in a hardware register to cause the hardware to transmit in the second duplex mode while maintaining the connection with the link partner and using auto-negotiation when establishing the connection; and detecting a transmission speed of the link partner after determining that the link partner does not have auto-negotiation enabled, wherein the common connection speed comprises the detected transmission speed of the link partner in a communications network. Yang from the same or similar field of endeavor teaches a provision of setting a flag in a hardware register to cause the hardware to transmit in the second duplex mode while maintaining the connection with the link partner (see column 13 lines 14-19) and using auto-negotiation when establishing the connection (see column

12 lines 46-57). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use setting a flag in a hardware register to cause the hardware to transmit in the second duplex mode while maintaining the connection with the link partner and using auto-negotiation when establishing the connection as taught by Yang et al. in the communication network of Crayford. The setting a flag in a hardware register to cause the hardware to transmit in the second duplex mode while maintaining the connection with the link partner and using auto-negotiation when establishing the connection can be modified into the network of Crayford since it does teach different mode of the communications. The motivation for setting a flag in a hardware register to cause the hardware to transmit in the second duplex mode while maintaining the connection with the link partner and using auto-negotiation when establishing the connection being that it adapting the system's mode.

Allowable Subject Matter

6. Claims 6, 16, and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

For claims 6, 16, and 30, the prior art fails to teach a combination of : wherein the first duplex mode comprises full duplex and the second duplex mode comprises half duplex, and wherein the hardware switches to the half duplex mode in response to the flag being set by: detecting a receive signal while transmitting data; continuing to transmit the data in response to detecting the receive signal and the flag indicating the full duplex mode; and terminating the

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transmission of the data in response to detecting the receive signal and the flag indicating the half duplex mode.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sambamurthy et al. (5,311,114) is cited to show a system which is considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUC H. TRAN whose telephone number is (571) 272-3172. The examiner can normally be reached on M-F (8-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHI PHAM can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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P.t
9/30/07



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SUPERVISORY PATENT EXAMINER

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